

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (canceled)

2. (currently amended) [[A]] The device according to claim [[1]] 4, wherein the blocking of said strands of thread using said blocking means is constructed and arranged for automatically triggering said tensioning of the threads to [[a]] said first predetermined tension value.

3. (canceled)

4. (currently amended) ~~A suture device according to claim 3,~~ An implantable device for semiautomatic suturing using a surgical thread, the suturing enabling biological and/or artificial tissues to be united, the device comprising:

blocking means enabling two strands of the thread of a suture to be connected together in a blocking zone; and

a bearing element having a bearing surface for bearing against the tissues to be sutured together, said bearing surface comprising a contact zone in which the bearing surface is adapted to be in contact with tissue, and controlled tensioning means for applying controlled tensioning to said thread, and suitable for exerting a tension having a first predetermined tension value independent of tension exerted on the threads

before blocking thereof after the two strands of said thread have been blocked together using said blocking means, with the junction between said bearing element and said blocking zone of the device being provided by said controlled tensioning means,

wherein said controlled tensioning means is constructed and arranged to enable the distance between said blocking zone and said contact zone adapted to be in contact with the tissue to be adjusted after blocking of the strands of thread by the blocking means, between:

an initial distance in which said two strands of thread can be blocked together; and

a final distance suitable for exerting said controlled tension having said first predetermined tension value after the blocking,

wherein said tensioning means $[(4_3)]$ comprises resilient junction means between said contact zone $[(4_1)]$ and said blocking zone $[(4_2)]$ so as to enable the distance between said contact zone $[(4_1)]$ and said blocking zone $[(4_2)]$ to be adjusted between:

a controlled initial distance $[(L)]$ in which the spacing between said contact zone $[(4_1)]$ and said blocking zone $[(4_2)]$ is controlled by at least one of a first link element $[(5_1)]$ ~~and/or~~ and a first spacer element $[(5_2)]$, and said initial distance $[(L)]$ corresponding to a distance in which said blocking zone $[(4_2)]$ and said contact zone $[(4_1)]$ are in a

close-together position by applying compression compared with a spaced-apart, rest position ~~(L+a)~~; and

said final distance ~~(L' = L ± b)~~ corresponds to a position of force equilibrium in which the distance between said contact zone $[(4_1)]$ and said blocking zone $[(4_2)]$ is no longer controlled by $[a]$ said at least one of said first link element $[(5_1)]$ ~~and/or a~~ and said first spacer element $[(5_2)]$.

5. (currently amended) $[A]$ The device according to claim 4, wherein said initial distance $[(L)]$ between said blocking zone $[(4_2)]$ and said contact zone $[(4_1)]$ can be obtained using a first link element $[(5_1)]$ suitable for initially connecting said blocking zone $[(4_2)]$ and said contact zone $[(4_1)]$ of the device, and said final distance ~~(L' = L ± b)~~ of said first blocking zone $[(4_2)]$ relative to said first contact zone $[(4_1)]$ can be implemented by releasing said first link element $[(5_1)]$.

6. (currently amended) $[A]$ The device according to claim 5, wherein said first link element $[(5_1)]$ is suitable for co-operating with said blocking means $[(2)]$ in such a manner that said first link element $[(5_1)]$ is released once said strands of thread ~~(3₁, 3₂)~~ have been blocked together using said blocking means $[(2)]$.

7. (currently amended) $[A]$ The suture device $[(1_1)]$ according to claim 4, wherein said device $[(1_1)]$ co-operates

with a placing instrument $[(1_2)]$ to which it is secured, in such a manner that:

prior to said bearing surface $[(4_1)]$ coming into contact with said tissue, said resilient junction means $[(4_3)]$ are at rest, and said bearing surface $[(4_1)]$ and said blocking zone $[(4_2)]$ are in a spaced-apart position;

when said contact zone $[(4_1)]$ is pressed against said tissue for suturing, said resilient junction means $[(4_3)]$ is placed in compression and the distance between said contact zone $[(4_1)]$ and said blocking zone $[(4_2)]$ decreases to said initial distance $[(L)]$ controlled by said first spacer element $[(5_2)]$, said bearing surface $[(4_1)]$ coming into abutment against said first spacer element $[(5_2)]$ of said instrument; and

said final distance $[(L')]$ is obtained by co-operation between said placing instrument $[(1_2)]$ and said device $[(1_1)]$.

8. (currently amended) $[A]$ The device according to claim 2, constructed and arranged for the thread to be disengaged so as to be capable of being cut between said blocking zone $[(4_2)]$ and suture orifices ~~$(6_1, 6_2)$~~ adapted to be in said tissue, between said blocking zone $[(4_2)]$ and said contact zone $[(4_1)]$.

9. (currently amended) ~~A device according to claim 1, further including~~ An implantable device for semiautomatic

suturing using a surgical thread, the suturing enabling biological and/or artificial tissues to be united, the device comprising:

blocking means enabling two strands of the thread of a suture to be connected together in a blocking zone;

a bearing element having a bearing surface for bearing against the tissues to be sutured together, said bearing surface comprising a contact zone in which the bearing surface is adapted to be in contact with tissue, and controlled tensioning means for applying controlled tensioning to said thread, and suitable for exerting a tension having a first predetermined tension value independent of tension exerted on the threads before blocking thereof after the two strands of said thread have been blocked together using said blocking means, with the junction between said bearing element and said blocking zone of the device being provided by said controlled tensioning means; and

guide means $[(7)]$ enabling the two strands (3_1-3_2) to be held laterally spaced apart from each other at $[(the)]$ suture orifices (6_1-6_2) adapted to be in said tissue.

10. (currently amended) $[[A]]$ The device according to claim 9, wherein said guide means (7_1-7_2) comprises at least one notch $[(7_1)]$ made in said bearing surface defining said contact zone $[(4_1)]$.

11. (currently amended) $[[A]]$ The device according to claim 10, wherein said guide means comprises, on an under-face of

[[a]] said notch $[(7_1)]$, a piece of fabric $[(7_2)]$ of biocompatible material suitable for being pierced by said two strands of thread in order to keep them spaced apart.

12. (currently amended) [[A]] The device according to claim 4, wherein is U-shaped, comprising:

a bottom first branch $[(4_1)]$ defining [[a]] said bearing surface for bearing against said tissue in use, and including said contact zone $[(4_1)]$;

a top second branch $[(4_2)]$ including said blocking zone and secured with or co-operating with said blocking means $[(2)]$; and

a junction element $[(4_3)]$ between said first and second branches ~~$(4_1, 4_2)$~~ , the junction element being made of a semirigid material presenting elasticity.

13. (currently amended) [[A]] The device according to claim 4, which comprises:

a first plate $[(4_1)]$ defining [[a]] said bearing surface for bearing on said tissue in use, and including said contact zone;

a second plate $[(4_2)]$ including said blocking zone;

said first and second plates ~~$(4_1, 4_2)$~~ being connected together by a junction element $[(4_3)]$ comprising a resilient spring wire or spring blade.

14. (currently amended) [[A]] The device according to claim 13, wherein:

said spring wire $[(4_3)]$ defines a frustoconical envelope;

said first plate $[(4_1)]$ is placed at the end of said spring beside the large base of said truncated cone formed by said spring;

said second plate $[(4_2)]$ is placed at the end of said spring that is beside the small base of said truncated cone formed by said spring; and

said spring $[(4_3)]$ is suitable for being received in its own empty central space when it is compressed by moving said first and second plate towards each other.

15. (currently amended) ~~A device according to claim 1,~~
An implantable device for semiautomatic suturing using a surgical thread, the suturing enabling biological and/or artificial tissues to be united, the device comprising:

blocking means enabling two strands of the thread of a suture to be connected together in a blocking zone; and

a bearing element having a bearing surface for bearing against the tissues to be sutured together, said bearing surface comprising a contact zone in which the bearing surface is adapted to be in contact with tissue, and controlled tensioning means for applying controlled tensioning to said thread, and suitable for exerting a tension having a first predetermined tension value independent of tension exerted on the threads before blocking thereof after the two strands of said thread have been blocked

together using said blocking means, with the junction between said bearing element and said blocking zone of the device being provided by said controlled tensioning means,

wherein said blocking means ~~[[2]]~~ comprises two blocking surfaces ~~(2₁, 2₂)~~ capable of moving between a spaced-apart position in which it is possible to insert said strands ~~(3₁, 3₂)~~ of thread between said two blocking surfaces ~~(2₁, 2₂)~~, and suitable for blocking said strands ~~(3₁, 3₂)~~ of thread together by friction between the threads and said two blocking surfaces ~~(2₁, 2₂)~~ once the surfaces are in a close-together, blocking position, the displacement of said two surfaces between said spaced-apart position and said close-together position automatically triggering said tensioning of the threads after blocking.

16. (currently amended) ~~[[A]]~~ The device according to claim 15, wherein said blocking of the strands of thread using said blocking means is suitable for being triggered automatically.

17. (currently amended) ~~[[A]]~~ The device according to claim 16, wherein the automatic triggering of the blocking of said strands of thread using said blocking means take place when the device is pressed into contact with the tissues to be sutured together with a bearing force that is greater than a second predetermined value.

18. (currently amended) [[A]] The device according to claim 15, wherein said blocking means comprises two jaws [[(2)]] resiliently connected together and forming respective blocking surfaces ~~(2₁, 2₂)~~ which are held apart by a second spacer element [[(2₃)]], said second spacer element [[(2₃)]] being suitable for being released by being disengaged or broken so as to enable said blocking surfaces ~~(2₁, 2₂)~~ to move towards each other and block said strands ~~(3₁, 3₂)~~ of thread together.

19. (currently amended) [[A]] The device according to claim 18, wherein said second spacer element [[(2₃)]] is suitable for being released automatically.

20. (currently amended) [[A]] The device according to claim 18, wherein said second spacer element [[(2₃)]] is suitable for being released by automatically triggering release of said first link element [[(5₁)]] between said blocking zone [[(4₂)]] and said contact zone [[(4₁)]] of the device so that said zones adopt a said final distance ~~(L' - L + b)~~ that is adjusted to allow [[a]] said first controlled tension value to be exerted on said strands of thread.

21. (currently amended) [[A]] The device according to claim [[1]] 4, wherein said bearing element [[(4₁)]], said blocking means [[(2)]], and said controlling tensioning means [[(4₃)]] form a single one-piece mechanical part.

22. (currently amended) [[A]] The device according to claim 17, wherein the second predetermined value is in a range of 0.2 N to 20 N.

23. (currently amended) [[A]] The device according to claim 19, wherein said second spacer element [[(2₃)] is constructed and arranged for being released automatically by pressing a placing instrument [[(1₂)] against said second spacer element [[(2₃)] while said bearing surface [[(4₁)] of the device is exerting pressure on the ~~tissues~~ tissue in use that is greater than a second determined value of not less than 10 N.